PERIODIC MAINTENANCE

CONTENTS

PERIODIC MAINTENANCE SCHEDULE

The chart below lists the recommended intervals for all the required periodic service work necessary to keep the motorcycle operating at peak performance and economy.

NOTE:
More frequent servicing should be performed on motorcycles that are used under severe conditions.

PERIODIC MAINTENANCE CHART

ENGINE

Item \ Interval	Initial 1,000 km	Every 4,000 km	Every 8,000 km	page
Battery	Inspect	Inspect	–	2-3
Cylinder head nuts exhaust pipe nuts	Inspect	Inspect	–	2-4
Cylinder head, cylinder.	–	–	Clean	2-4
Spark plug	Clean	Clean	Replace	2-4
Fuel line	Inspect	Inspect	–	2-5
	Replace every 4 years			
Air cleaner element	Clean every 3,000 km			2-5
Throttle cable play	Inspect	Inspect	–	2-6
Engine idle speed	Inspect	Inspect	–	2-7
Oil pump	Inspect	Inspect	–	2-7
Transmission oil	Inspect	–	Inspect	2-8

CHASSIS

Item \ Interval	Initial 1,000 km	Every 4,000 km	Every 8,000 km	page
Brakes	Inspect	Inspect	–	2-9
Brake hose	Inspect	Inspect	–	2-9
	Replace every 4 years			
Brake fluid	Inspect	Inspect	–	2-9
	Replace every 2 years			
Tires	Inspect	Inspect	–	2-10
Steering	Inspect	Inspect	–	2-11
Front suspension	Inspect	–	Inspect	2-11
Rear suspension	Inspect	–	Inspect	2-12
Chassis bolts and nuts	Inspect	Inspect	–	2-12

LUBRICATION CHART

The maintenance schedule, which follows, is based on this philosophy. It is timed by odometer indication, and is calculated to achieve the ultimate goal of motorcycle maintenance in the most economical manner.

Item \ Interval	Initial and Every 4,000 km	Every 8,000 km
Throttle cable	Motor oil	–
Throttle grip	–	Grease
Brake cable	Motor oil	–
Speedometer cable	–	Grease
Speedometer gear box	–	Grease
Brake cam	–	Grease
Steering stem bearing	Grease every 2 years or 20,000 km	

⚠ WARNING

Be careful not to apply too much grease into the brake cam. If grease is on the linings, brake slippage will result.

Lubricate exposed parts which are subject to rust, with either motor oil or grease whenever the motorcycle has been operated under wet or rainy conditions.
Before lubricating each part, clean off rusty sports and wipe off grease, oil, dirt or grime.

MAINTENANCE PROCEDURE

This section describes the service procedures for each section of the periodic maintenance.

BATTERY

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

- Remove the pillion seat for measure of battery voltage.
- Remove the battery ⊖ lead and then ⊕ lead at the battery terminls and remove the battery.
- Using pocket tester, measure the battery voltage.

If the tester reading is less than 12.0V, recharge the battery with a battery charger. (Refer to page 5-13)

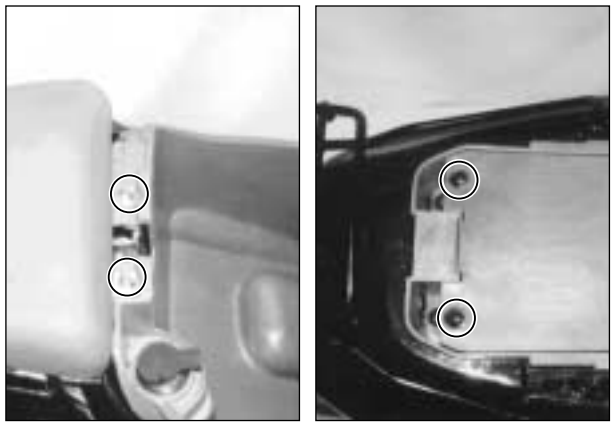
TOOL Pocket tester : 09900-25002

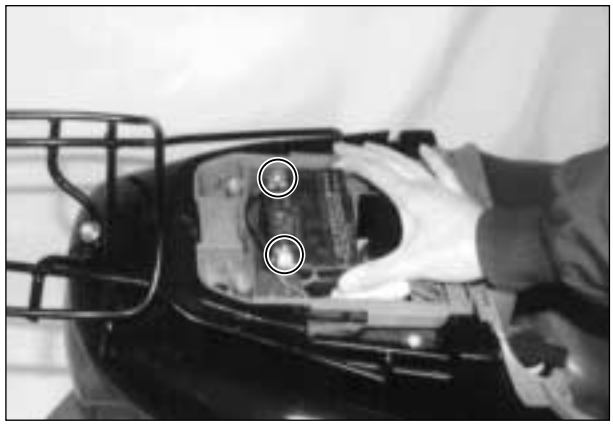
Bettery voltage	Minimum 12.0V

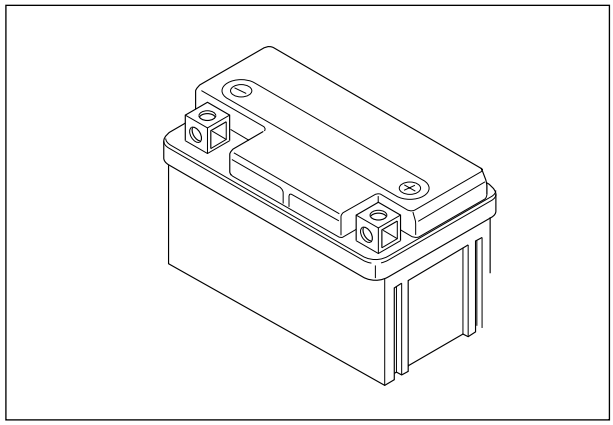
Recharge	
Standard charge	0.4A × 5~10 Hours
Fast charge	4A × 30 Minutes

⚠ CAUTION

· When recharging the battery remove the battery from motorcycle. Otherwise, regulator/rectifier unit should be an obstacle.
· When recharging the battery, do not remove the caps.
· When recharging the battery, above the charge electric current and time should be kept as 12V.







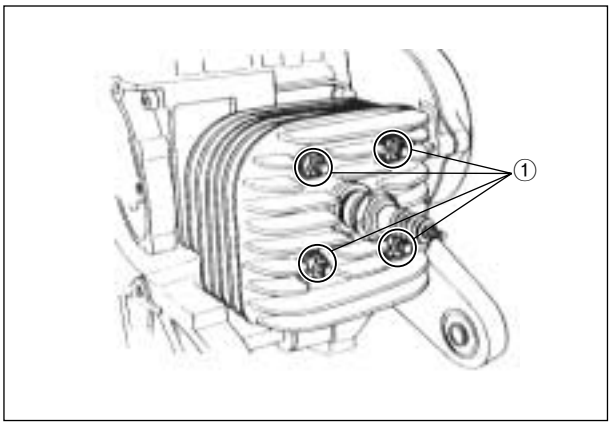
CYLINDER HEAD NUTS AND EXHAUST PIPE NUTS

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

CYLINDER HEAD NUTS

- Remove the personal trunk.
- Remove the spark plug cap.
- Remove the cylinder head cover bolt.
  (Refer to page 3-5)
- Tighten the four nuts ① to the specified torque with a torque wrench, when engine is cold.

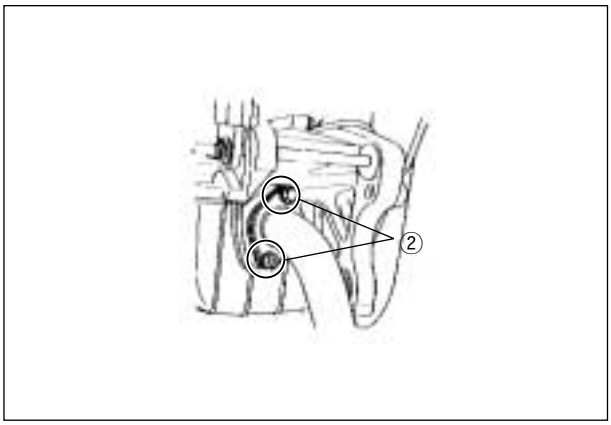
Cylinder head nut : 8~12 N · m (0.8~1.2 kg · m)



EXHAUST PIPE NUTS

- Tighten the exhaust pipe nuts ② to the specified torque.

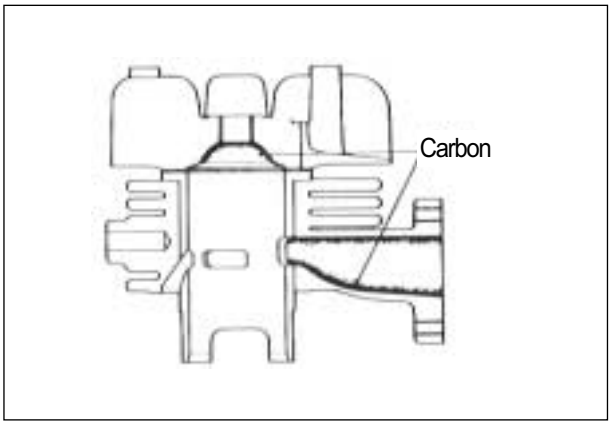
Exhaust pipe nuts : 8~12 N · m (0.8~1.2 kg · m)



CYLINDER HEAD AND CYLINDER

NOTE:
Remove carbon Every 8,000km.

Carbon deposits in the combustion chamber and the cylinder head will raise the compression ratio and may cause preignition or overheating. Carbon deposited at the exhaust port of the cylinder will prevent the flow of exhaust gases, reducing the output. Remove carbon deposits periodically.

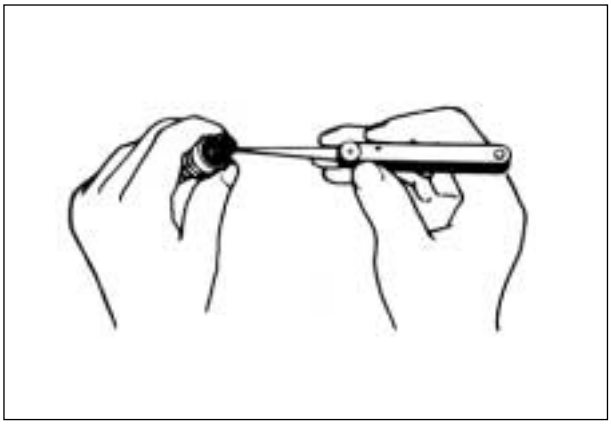


SPARK PLUG

NOTE:
Inspect Initial 1,000km and Every 4,000km,
Replace every 8,000km.

Neglecting the spark pulg maintenance eventually leads to difficult starting and poor performance. If the spark plug is used for a long period, the electrode gradually burns away and carbon builds up along the inside part. In accordance with the Periodic Inspection Chart, the plug should be removed for inspection, cleaning and to reset the gap.

- Carbon deposits on the spark plug will prevent good sparking and cause misfiring. Clean the deposits off periodically.



● If the center electrode is fairly worn down, the plug should be replaced and the plug gap set to the specified gap using a thickness gauge.

TOOL Thickness gauge : 09900-20804

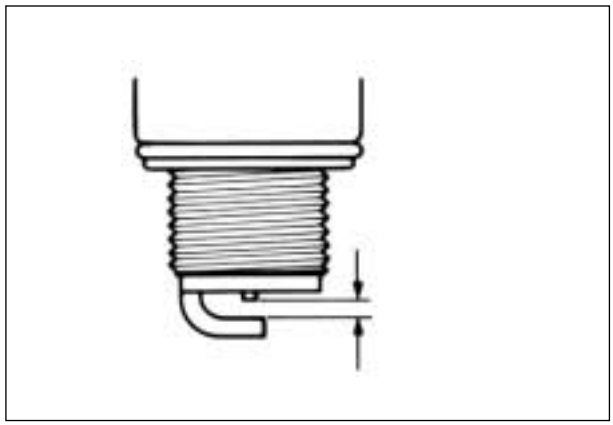
Spark plug gap	0.6 ~ 0.7 mm

● Check the spark plug for burnt condition. If abnormal, replace the plug as indicated in the chart.

TYPE	SPARK PLUG SPECIFICATION
Standard	BR8HSA

● Tighten the spark plug to the specification.

Spark plug : 25~30 N · m (2.5~3.0 kg · m)



⚠ CAUTION

- **To check the spark plug, first make sure that the fuel used is unleaded gasoline, and if plug is either sooty with carbon or burnt white, replace it.**
- **Confirm the thread size and reach when replacing the plug.**

FUEL LINE

NOTE:
Inspect Initial 1,000 km and Every 4,000 km,
Replace every four years.

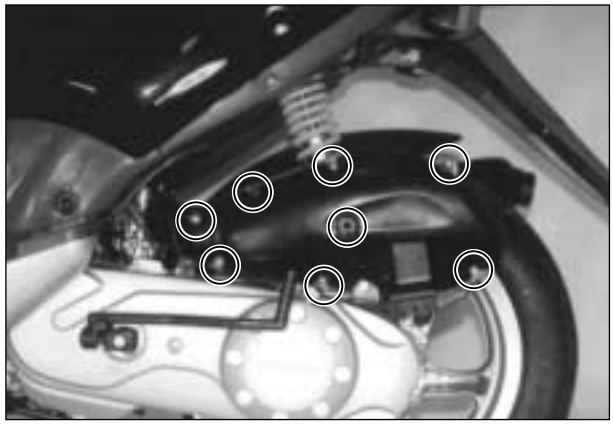
Inspect leakage of the fuel line and connection part.
If abnormal, replace it.

AIR CLEANER ELEMENT

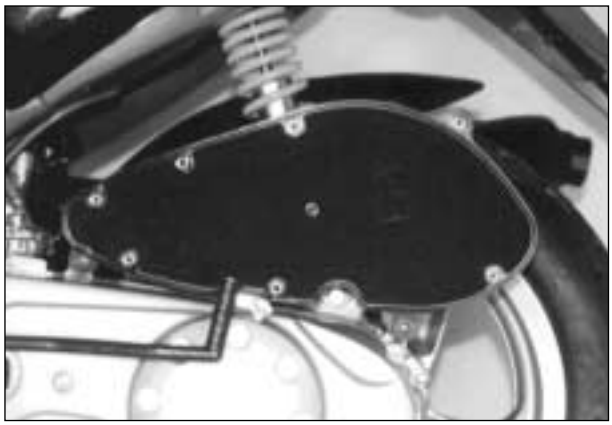
NOTE:
Clean Every 3,000km and Replace Every 12,000km.

If the air cleaner is clogged with dust, intake resistance will be increased with a resultant decrease in power output and an increase in fuel consumption. Check and clean the element in the following manner.

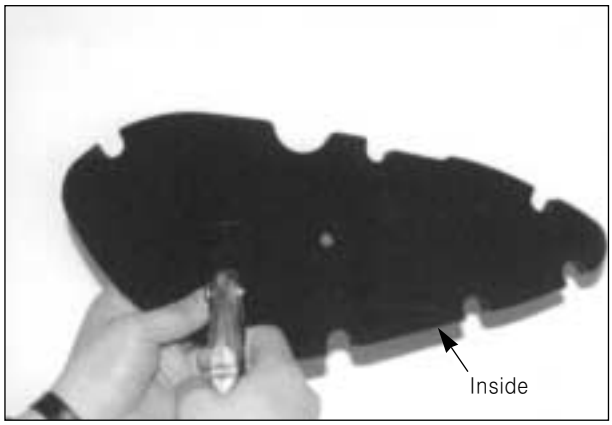
● Remove the air cleaner cover by removing the eight screw.



● Remove the air cleaner cover, separate the element.

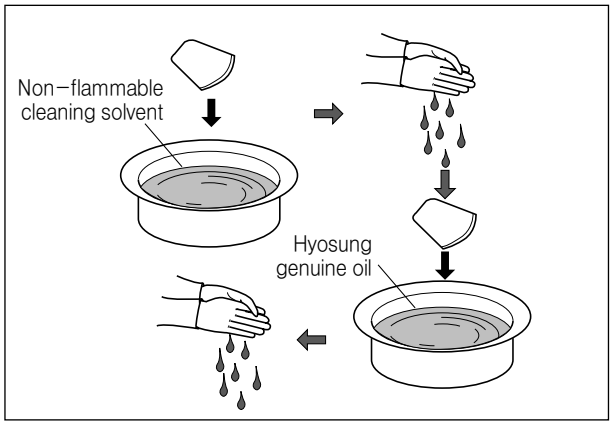


● Fill a washing pan of a proper size with non-flammable cleaning solvent. Immerse the element in the cleaning solvent and wash them clean.
● Squeeze the cleaning solvent out of the washed element by pressing it between the palms of both hands: do not twist or wiring the element or if will develop tears.
● Immerse the element in Hyosung genuine oil, and squeeze the oil out of the element leaving it slightly wet with oil.
● Fit the elements to the cleaner case properly.



⚠ CAUTION

- **Before and during the cleaning operation, inspect the element for tears. A torn element must be replaced.**
- **Be sure to position the element snugly and correctly, so that no incoming air will bypass it. Remember, rapid wear of piston rings and cylinder bore is often caused by a defective or poorly fitted element.**

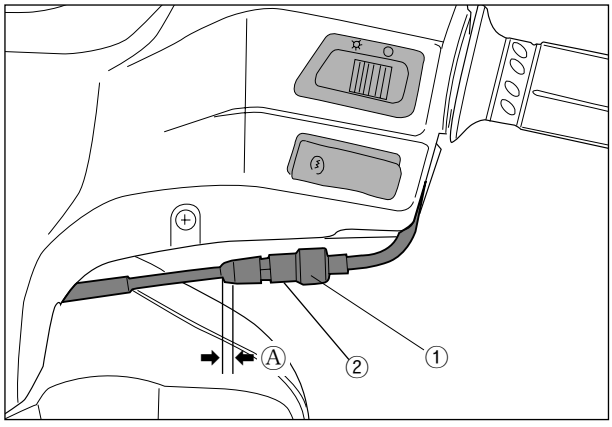


THROTTLE CABLE PLAY

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

● Loosen the lock nut ① and adjust the cable play Ⓐ by turning adjuster ② in or out to obtain the following cable play. After adjusting play, tighten the lock nut.

Throttle cable play	0.5 ~ 1.0 mm



ENGINE IDLE SPEED

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

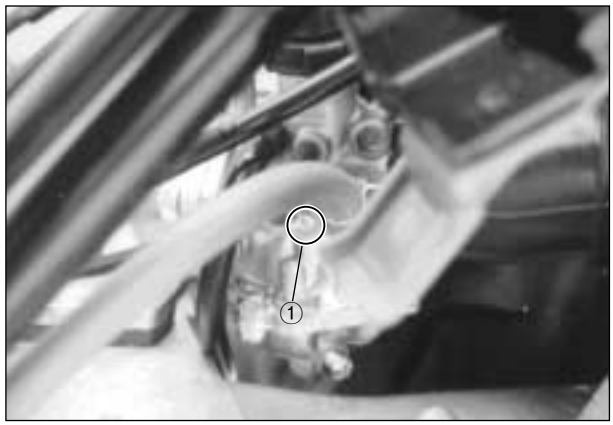
⚠ CAUTION

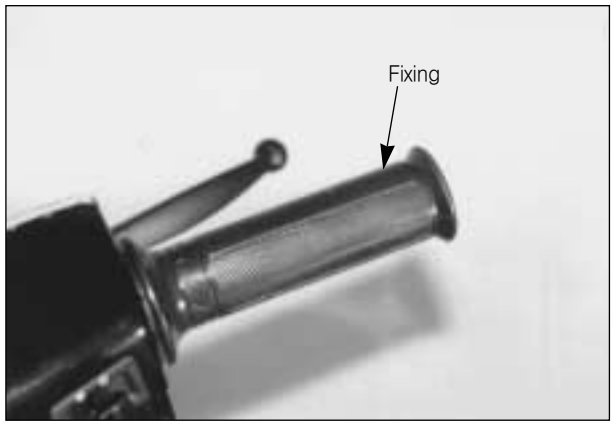
Make this adjustment when the engine is hot.

- start up the engine and set its speed at anywhere between 1,750 and 1,850 rpm by turning the throttle stop screw ①.

Engine idle speed	1,800 ± 50 rpm

TOOL Engine tachometer : 09900-26006





OIL PUMP

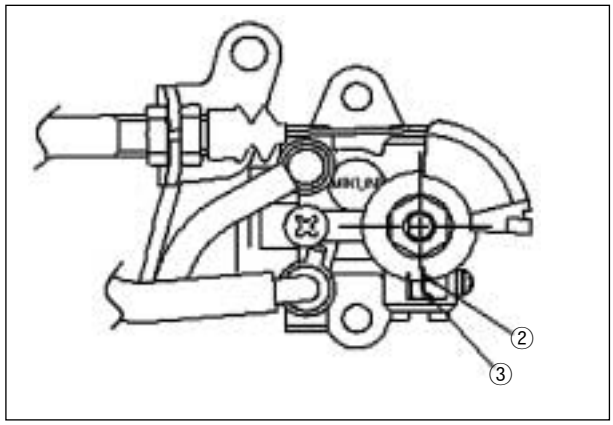
NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

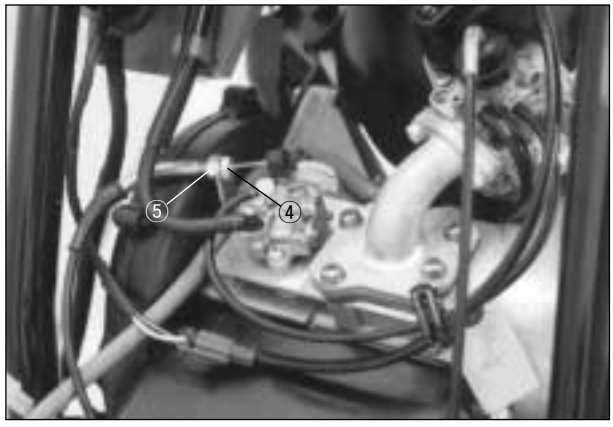
The engine oil is fed by the oil pump to the engine. The amount of oil fed to it is regulated by engine speed and oil pump control lever which is controlled by amount of throttle opening.
Check the oil pump in the following manner to confirm correct operation for throttle valve full closing position.

- Fix the throttle grip. (The early idling condition)
- Check whether the mark ② on the oil pump control lever is aligned with the index mark ③ when the throttle grip is fixed as above.
- If the marks are not aligned, loosen lock nuts ④ and turn the adjuster ⑤ in or out to align the marks.
- After aligning the marks, tighten the lock nuts ④.

⚠ CAUTION

Oil pump cable adjustment must be done after throttle cable adjustment.



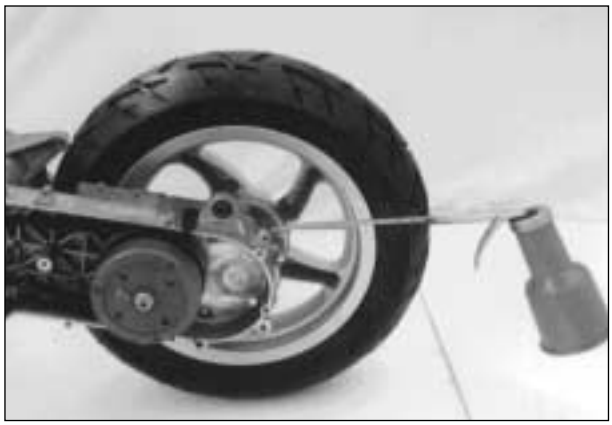


TRANSMISSION OIL

NOTE:
Inspect Initial 1,000 km and Every 8,000 km.

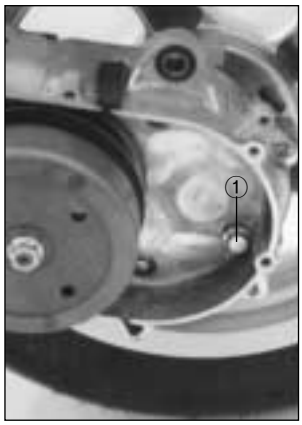
Inspect transmission oil periodically following procedure below.

- Remove the low leg shield.
- Remove the clutch cover.(Refer to page 3-6)



- Remove the oil level bolt ① and inspect oil level.
  If the level is below the level hole, add oil until oil flows from the level hole.
- Tighten the oil level bolt to the specified torque.

Oil level bolt : 9~15 N · m (0.9~1.5 kg · m)



BRAKES

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.
Replace the hose Every four years.
Replace the brake fluid Every two years.

FRONT BRAKE FLUID LEVEL

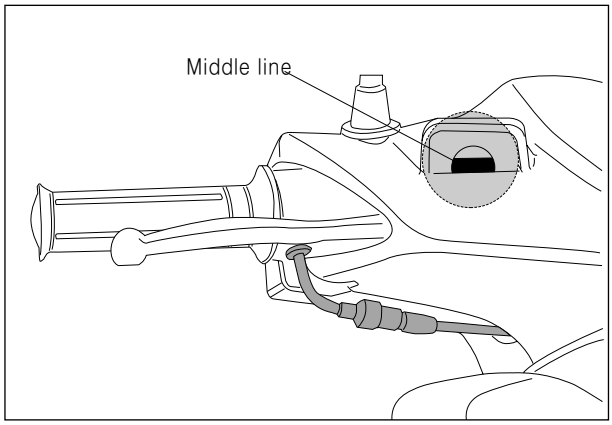
- Keep the motorcycle upright and place the handlebar straight.
- Check brake fluid level by observing the middle line on the brake fluid reservoir.
- When the level is bolow the middle line, replenish with brake fluid that meets the following specification.

Specification and classification	DOT4

HYOSUNG Brake fluid : 99000-23021

⚠ WARNING

The brake system of this motorcycle is filled with a glycolbased brake fluid. Do not use or mix different type of fluid such as silicone-based and petroleum-based. Do not use any brake fluid taken from old, used or unsealed containners. Never re-use the brake fluid left over from the last servicing and stored for long periods.

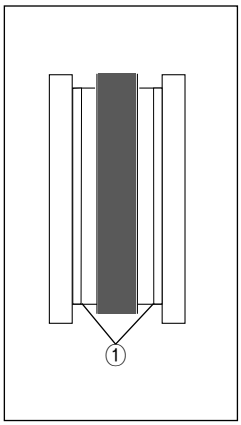


⚠ WARNING

Brake fluid, if it leaks, will interfere with safe running and immediately discolor painted surfaces. Check the brake hoses for cracks and hose joints for leakage before riding.

BRAKE PADS

Wearing condition of brake pads can be checked by observing the limit line ① marked on the pad. When the wear exceeds the limit mark, replace the pads with new ones.



BRAKE LAMP SWITCH

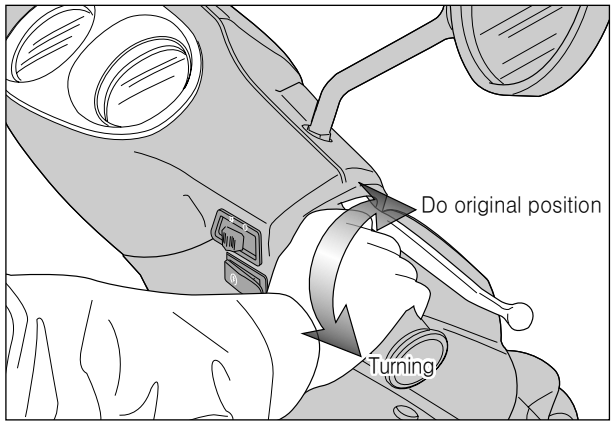
For the brake lamp come on after the brake lever is pulled, adjust the brake lamp switch.

BLEEDING AIR FROM THE BRAKE FLUID CIRCUIT

Air trapped in the fluid circuit acts like a cushion to absorb a large proportion of the pressure developed by the master cylinder and thus interferes with the full braking performance of the brake caliper. The presence of air is indicated by "sponginess" of the brake lever and also by lack of braking force. Considering the danger to which such trapped air exposes the machine and rider, it is essential that, after remounting the brake and restoring the brake system to the normal condition, the brake fluid circuit be purged of air in the following manner:

- Fill up the master cylinder reservoir to the upper end of the inspection window. Replace the reservoir cap to prevent entry of dirt.
- Attach a pipe to the caliper bleeder valve, and insert the free end of the pipe into a receptacle.

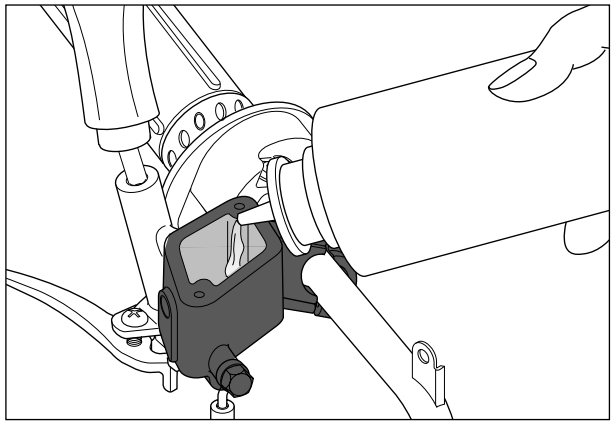
Bleeder valve : 6~9 N · m (0.6~0.9 kg · m)



- Bleed air from the bleeder valve.
- Squeeze and release the brake lever several times in rapid succession, and squeeze the lever fully without releasing it. Loosen the bleeder valve by turning it a quarter of a turn so that the brake fluid runs into the receptacle: this will remove the tension of the brake lever causing it to touch the handlebar grip. Then, close the valve, pump and squeeze the lever, and open the valve. Repeat this process until the fluid flowing into the receptacle no longer contains air bubbles.

⚠ CAUTION

Replenish the brake fluid reservoir as necessary while bleeding the brake system.
Make sure that there is always some fluid visible in the reservoir.



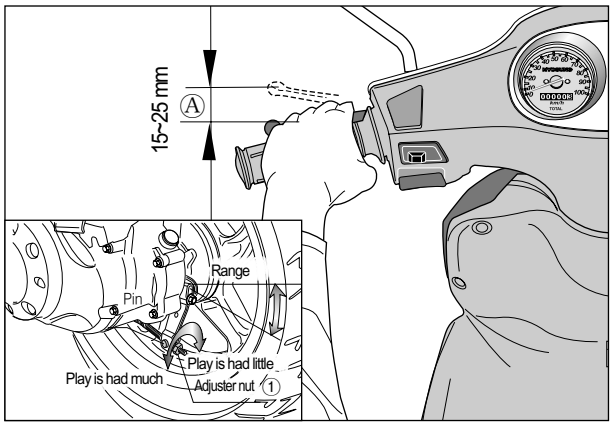
- Close the bleeder valve, and disconnect the pipe. Fill the reservoir to the upper end of the inspection window.

⚠ WARNING

Handle the brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials, etc.

REAR BRAKE

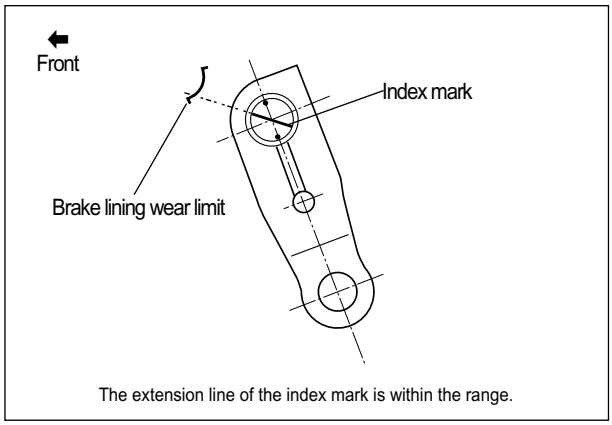
Adjust by turning the adjusting nut ① so that the play Ⓐ is 15~25 mm as shown in the illustration.



Brake lining wear limit

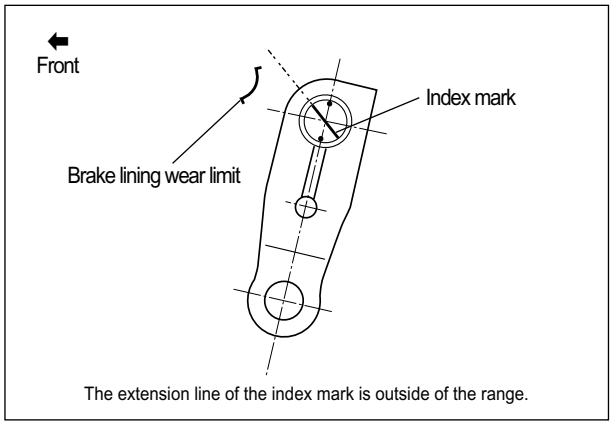
This motorcycle is equipped with the brake lining wear limit indicator on the rear brake. As shown in the illustration at right, at the condition of normal lining wear, an extended line from the index mark on the brake camshaft should be within the range embossed on the crankcase LH. To check wear of the brake lining, follow the steps below.

- First check if the brake system is properly adjusted.
- While operating the brake, check to see that the extension line from the index mark is within the range on the brake panel.



The extension line of the index mark is within the range.

- If the index mark is outside the range as shown in the illustration at right, the brake shoe assembly should be replaced to ensure safe operation.



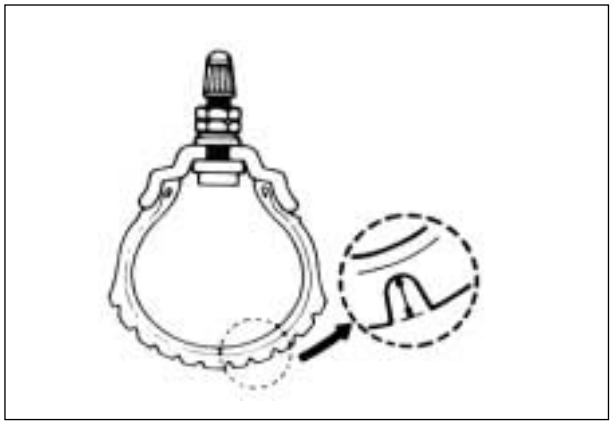
The extension line of the index mark is outside of the range.

TIRES

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

TIRE PRESSURE

If the tire pressure is too high, the motorcycle will tend to ride stiffly and have poor traction. Conversely, if the tire pressure is too low, stability will be adversely affected. Therefore, maintain the correct tire pressure for good roadability and to prolong tire life.



⚠ CAUTION

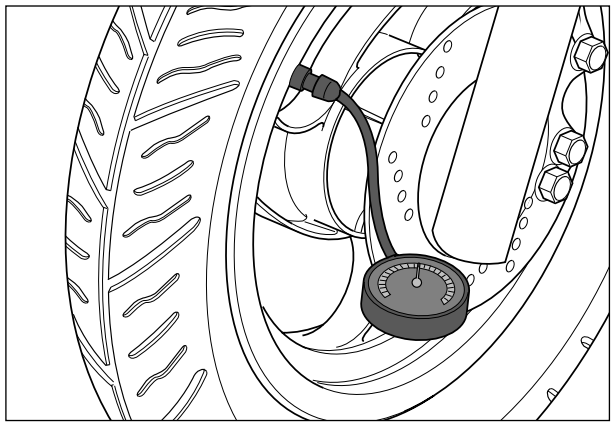
The standard tire fitted on this motorcycle is 110/70-12 47J for front and 120/70-12 51J for rear. The use of a tire other than the standard may cause handling instability. It is highly recommended to use a HYOSUNG Genuine Tire.

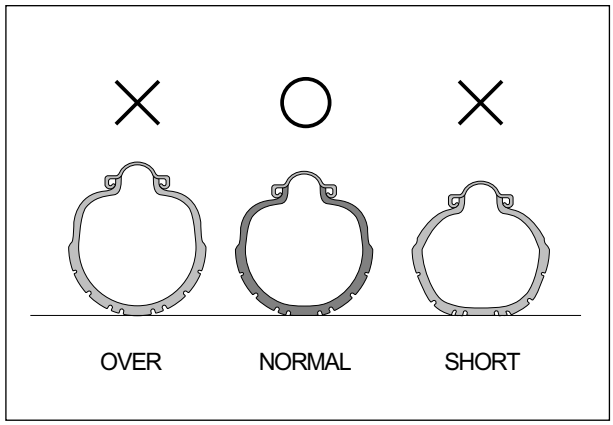
COLD INFLATION TIRE PRESSURE	NORMAL RIDING			
	SOLO RIDING		DUAL RIDING	
	kpa	kg/㎠	kpa	kg/㎠
FRONT	123	1.25	172	1.75
REAR	196	2.00	221	2.25

TIRE TREAD CONDITION

Operating the motorcycle with the excessively worn tires will decrease riding stability and consequently invite a dangerous situation. It is highly recommended to replace the tire when the remaining depth of tire tread reaches the following specification.

TREAD DEPTH SERVICE LIMIT	
FRONT	1.6 mm
REAR	1.6 mm





STEERING

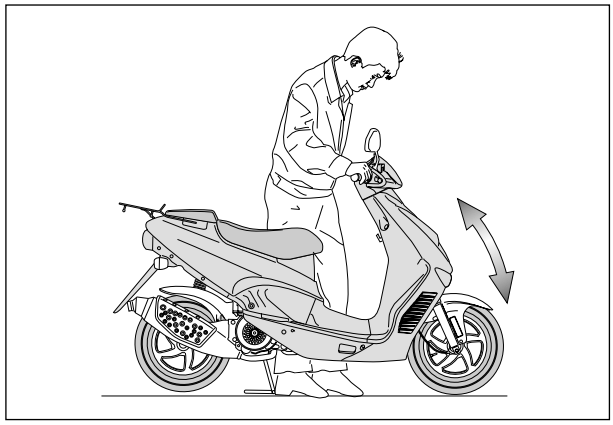
NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

Steering should be adjusted properly for smooth turning of handlebars and safe running. Too stiff steering prevents smooth turning of handlebars and too loose steering will cause poor stability.
Check that there is no play in the front fork assembly by supporting the machine so that the front wheel is off the ground, with wheel straight ahead, grasp lower shock absorber near the axle and pull forward. If play is found, perform steering bearing adjustment.(Refer to page 6-21)

FRONT SUSPENSION

NOTE:
Inspect Initial 1,000 km and Every 8,000 km.

Inspect the front shock absorber for oil leakage or other damage, and replace the defective parts, if necessary.



REAR SUSPENSION

NOTE:
Inspect Initial 1,000 km and Every 8,000 km.

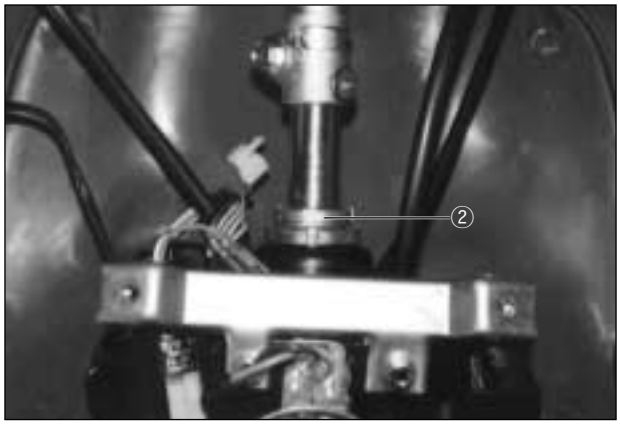
Inspect the rear shock absorber for oil leak and the mounting rubbers including engine mountings for wear and damage. Replace the defective part if necessary.

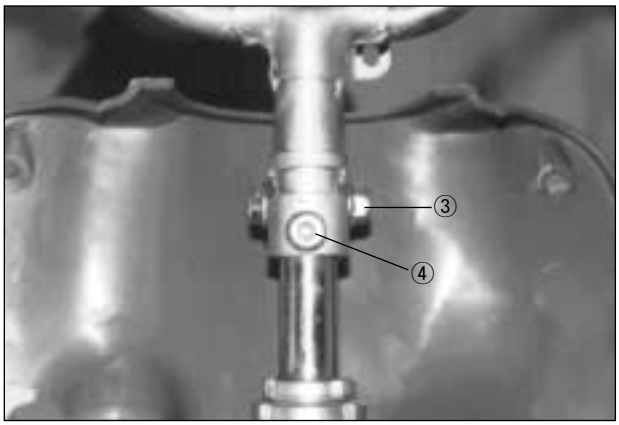
CHASSIS AND ENGINE MOUNTING BOLTS AND NUTS

NOTE:
Inspect Initial 1,000 km and Every 4,000 km.

These bolts and nuts listed below are important safety parts. They must be loosened first and retightened, to the specified torque with a torque wrench.

- Front axle nut(①) : 33~52 N · m (3.3~5.2 kg · m)
- Steering stem lock nut (②) : 60~100 N · m (6.0~10.0 kg · m)
- Handlebar clamp nut(③) : 48~52 N · m (4.8~5.2 kg · m)
- Handlebar set bolt(④) : 22~28 N · m (2.2~2.8 kg · m)
- Front brake master cylinder bolt(⑤) : 8~12 N · m (0.8~1.2 kg · m)
- Front brake hose union bolt(⑥) : 20~25 N · m (2.0~2.5 kg · m)
- Front brake caliper mounting bolt(⑦) : 18~28 N · m (1.8~2.8 kg · m)
- Front brake air bleeder valve(⑧) : 6~9 N · m (0.6~0.9 kg · m)
- Rear axle nut(⑨) : 60~90 N · m (6.0~9.0 kg · m)
- Rear shock absorber bolt(upper and lower)(⑩) : 22~35 N · m (2.2~3.5 kg · m)
- Rear brake cam lever nut(⑪) : 6~9 N · m (0.6~0.9 kg · m)
- Engine mounting bracket bolt(⑫) : 48~72 N · m (4.8~7.2 kg · m)
- Engine mounting bolt(⑬) : 40~60 N · m (4.0~6.0 kg · m)

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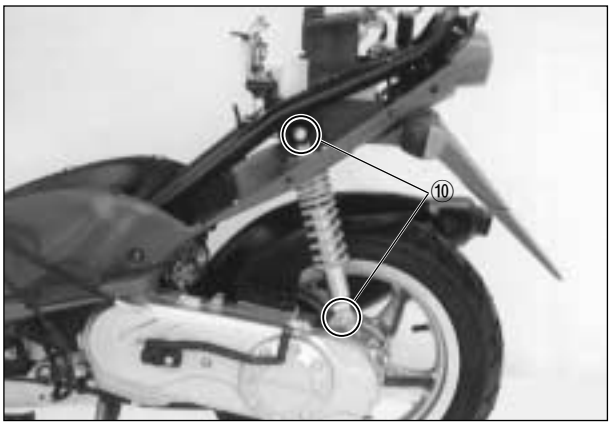
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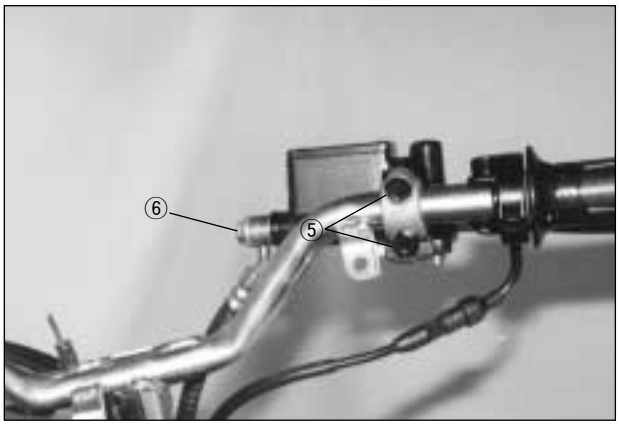
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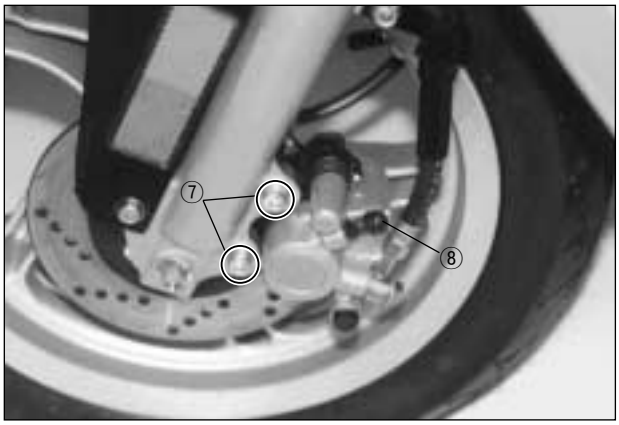
⑪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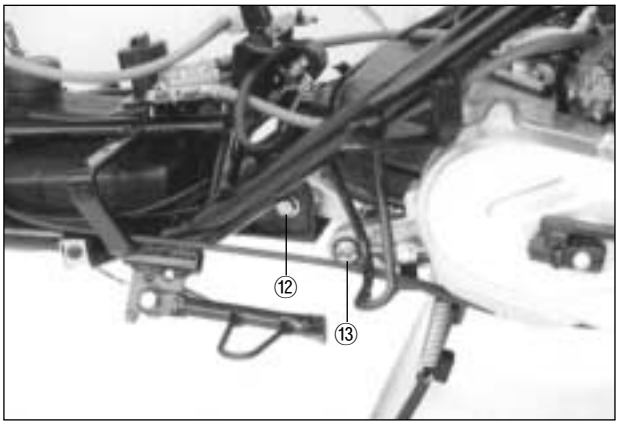
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